Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for real-time measurement of the performance of communications on a large area network between a selected server and a plurality of users at client machines, based upon actual user experience, including:

accessing a server log having user-interaction records indicative of user interactions that occur with one or more applications running on the selected server and that are carried on communications associated with routings through nodes of the network ~~of actual user access to the selected server~~;

determining from the records, assessments of the performance of the communications experienced by the plurality of users;

determining correlations between the assessments of the performance and the routings of the communications; and

based on the correlations, modifying one or more of the routings to improve the performance.

~~filtering out selected records from the server log, wherein the filtering removes the selected records from further consideration;~~

~~aggregating records from the server log into a plurality of aggregate slots, each slot having at least one time bin which represents an interval of time, based on an aggregation method;~~

~~performing at least one statistical analysis separately on each time bin of each aggregate slot; and~~

~~outputting the results of such statistical analysis as an indication of actual access to server usage by users.~~

2. (Previously Presented) The method of claim 1, wherein at least one of the nodes is part of a communication path connecting one of the client machines to the selected server.

3. (Original) The method of claim 1, further including generating an event notification if a selected statistical analysis value is abnormal.

4. (Currently Amended) The method of claim 1, further including selecting [[the]] an aggregation method from a set of aggregation methods for aggregating the user-interaction records according to a parameter.

5. (Currently Amended) The method of claim [[1]] 4, wherein the aggregation method includes aggregation by log-file record column data value for each record from the server log.

6 – 10. (Canceled)

11. (Currently Amended) A system for real-time measurement of the performance of communications on a large area network between a selected server and a plurality of users at client machines, based upon actual user experience, including:

a server log having user-interaction records with data indicative of user interactions that occur with one or more applications running on the selected server and that are carried on communications associated with routings through nodes of the network ~~of actual user access to the selected server~~;

one or more processors configured to

determine from the records, assessments of the performance of the communications experienced by the plurality of users;

determine correlations between the assessments and the routings; and

based on the correlations, generate a command for modifying one or more of the routings to improve the performance.

~~means for filtering out selected records from the server log, wherein the means for filtering removes the selected records from further consideration;~~

~~means for accessing and aggregating records from the server log into a plurality of aggregate slots, each having at least one time bin which represents an interval of time, based on an aggregation method;~~

~~means for performing at least one statistical analysis of each time being of each aggregate slot; and~~

~~means for outputting the results of such statistical analysis as an indication of access to actual server usage by users.~~

12. (Previously Presented) The system of claim 11, wherein at least one of the nodes is part of a communication path connecting one of the client machines to the selected server.

13. (Original) The system of claim 11, further including means for generating an event notification if a selected statistical analysis value is abnormal.

14. (Currently Amended) The system of claim 11, further including means for selecting [[the]] an aggregation method from a set of aggregation methods for aggregating the user-interaction records according to a parameter.

15. (Currently Amended) The system of claim [[11]] 14, wherein the aggregation method includes aggregation by log-file record column data value for each record from the server log.

16 – 20. (Canceled)

21. (Currently Amended) A computer program, stored on a tangible computer-readable medium, for real-time measurement of the performance of communications on a large area network between a selected server and a plurality of users at client machines, based upon actual user experience, the computer program comprising instructions for causing a computer system to:

access a server log having user-interaction records indicative of user interactions that occur with one or more applications running on the selected server and that are carried on communications associated with routings through nodes of the network ~~of actual user access to the selected server~~;

determine from the records, assessments of the performance of the communications experienced by the plurality of users;

determine correlations between the assessments and the routings; and

based on the correlations, modify one or more of the routings to improve the performance.

~~filter out selected records from the server log, wherein the selected records are removed from further consideration;~~

~~aggregate records from the server log into a plurality of aggregate slots, each having at least one time bin, based on an aggregation method;~~

~~perform at least one statistical analysis of each time bin, representing a time interval, of each aggregate slot; and~~

~~output the results of each statistical analysis as an indication of actual server usage by users.~~

22. (Previously Presented) The computer program of claim 21, wherein at least one of the nodes is part of a communication path connecting one of the client machines to the selected server.

23. (Original) The computer program of claim 21, further including instructions for causing the computer system to generate an event notification if a selected statistical analysis value is abnormal.

24. (Currently Amended) The computer program of claim 21, further including instructions for causing the computer system to select [[the]] an aggregation method from a set of aggregation methods for aggregating the user-interaction records according to a parameter.

25. (Currently Amended) The computer program of claim [[21]] 24, wherein the aggregation method includes aggregation by log-file record column data for each record from the server log.

26 – 30. (Canceled)

31. (Currently Amended) A method as in claim 1, wherein determining assessments comprises applying a [[said]] statistical analysis that determines time for specified user access relative to a specified interval, and sorts said user access according to a number of times that the application exceeds said interval.

32. (Previously Presented) A method as in claim 1, wherein said server log includes a time stamp indicating when a record was formed, a client IP address, a time taken to complete transmission, and a size of the transmission.

33. (Currently Amended) A method as in claim 32, wherein said server log is formed by adding new data entry to the server log, and said server log is closed to further data entry prior to said [[performing]] determining assessments of the performance of the communications.

34. (Currently Amended) A method as in claim 32, ~~wherein said aggregating comprises~~ further comprising determining a geographic location from the IP address, and aggregating IP addresses having a specified relationship with a specified geographical location.

35. (Previously Presented) A method as in claim 32, further comprising aggregating said time bins into chronological order and determining trends among said time bins.

36. (Currently Amended) A method as in claim 32, ~~further comprising~~ wherein determining assessments of the performance of the communications comprises determining ~~using said information to~~ a computer byte density, transfer fate, and error fraction.

37. (Currently Amended) A method as in claim 32, wherein determining correlations comprise applying a [[said]] statistical analysis ~~is an assessment of~~ to assess a performance related measurement against a geographical location of a client.

38. (Currently Amended) A method as in claim 32, wherein determining correlations comprise applying a [[said]] statistical analysis ~~is an assessment of~~ to assess a route traversed during use of the ~~network application~~ one or more applications by an end user.

39. (Currently Amended) A method as in claim 1, wherein modifying one or more of the routings further comprises ~~further comprising~~ determining a new [[path]] routing ~~based on said results of said statistical analysis~~.

40. (Previously Presented) A system as in claim 11, wherein said server log includes a time stamp indicating when a record was formed, a client IP address, a time taken to complete transmission, and a size of the transmission.

41. (Currently Amended) A system as in claim 40, wherein said server log is formed by added new data as entries to the server log, and said server log is closed to further data entry prior to said ~~performing~~ determining assessments.

42. (Currently Amended) A system as in claim 40, wherein said ~~accessing means~~ one or more processors converts the IP address into a geographical location, and aggregates IP addresses having a specified relationship with a specified geographical location.

43. (Previously Presented) A system as in claim 40, wherein said statistical analysis is an assessment of performance related measurement against a geographical location of a client.

44. (Currently Amended) A system as in claim 40, wherein ~~said statistical analysis is~~ the one or more processors are configured to determine an assessment of a route traversed during use of the ~~network application~~ one or more applications by an end user.

45. (Currently Amended) A system as in claim 11, further comprising a communication routing part, determining a new routing ~~path based on said results of said statistical analysis~~.

46. (Previously Presented) The computer program as in claim 21, wherein said instructions to access the server log comprises instructions to access a server log that includes time information about records, client IP address, time taken to compete a transmission, and a size of the transmission.

47. (Currently Amended) The computer program as in claim 46, further comprising ~~wherein said instructions to aggregate include~~ instructions to convert the IP address into information indicative of a geographical location, and to aggregate the information according to the geographical location.

48. (Currently Amended) The computer program as in claim 47, further comprising ~~wherein said~~ instructions to perform ~~a statistical analysis perform~~ a statistical analysis of performance versus geographical location of the client.

49. (Currently Amended) The computer program as in claim 47, further comprising ~~wherein said~~ instructions to perform a statistical analysis ~~perform the a statistical analysis~~ assessing a route traversed during a network application.

50. (Currently Amended) The computer program as in claim 21 further comprising additional instructions to determine a new routing ~~path based on results of said statistical analysis~~.

51. (Currently Amended) The method of claim 34, wherein determining a geographic location ~~geographical or source information for each record~~ includes:

defining a database comprising large area network address blocks having geographical or source information;

comparing an address field in each record to the address blocks in the database; and

associating with each record the geographical or source information from an address block matching the address field of the record.

52. (Previously Presented) The method of claim 51, wherein comparing an address field in each record to the address blocks in the database includes:

defining an array of binary trees for the address blocks in the database, each address block within a binary tree within an array element being masked by a corresponding unique subnet mask value;

masking each address field in each record by a unique subnet value corresponding to a selected array element;

comparing each masked address field to an address field of the address blocks within the binary tree of the selected array element;

outputting selected fields of any matching address block; and

otherwise, continuing the step of comparing with a next selected array element until a match is found or all array elements have been compared.

53. (Currently Amended) The method of claim 1, further including:

determining exit routing paths from each selected server based on the records from the server log;

determining a best performing exit route based on [[the]] a statistical analysis of records from the server log;

biasing incoming and outgoing communications with respect to each server to use the determined best performing exit route.

54. (Currently Amended) The system of claim 11, further comprising:

means for determining geographical or source information for each record; and

means for selecting [[the]] an aggregation method to aggregate records based on such geographical or source information.

55. (Previously Presented) The system of claim 54, wherein the means for determining geographical or source information for each record includes:

a database comprising large area network address blocks having geographical or source information;

a comparison function for comparing an address field in each record to the address blocks in the database; and

an associating function for associating with each record the geographical or source information from an address block matching the address field of the record.

56. (Previously Presented) The system of claim 55, wherein the comparison function includes:

an array of binary trees from the address blocks in the database, each address block within a binary tree within an array element being masked by a corresponding unique subnet mask value;

means for masking each address field in each record by a unique subnet value corresponding to a selected array element;

means for comparing each masked address field to an address field of the address bocks within the binary tree of the selected array element;

means for outputting selected fields of any matching address block ;and

means for otherwise continuing the step of comparing with a next selected array element until match is found or all array elements have been compared.

57. (Currently Amended) The system of claim 11, further including:

means for determining exit routing paths for each selected server based on the records from the server log;

means for determining a best performing exit route based on [[the]] a statistical analysis of records from the server log;

means for biasing incoming and outgoing communications with respect to each server to use the determined best performing exit route.

58. (Currently Amended) The computer program of claim 21, further including instructions for causing the computer system to:

determine geographical or source information for each record; and

select [[the]] an aggregation method to aggregate records based on such geographical or source information.

59. (Previously Presented) The computer program of claim 58, wherein the instructions for causing the computer systems to determine geographical or source information for each record further include instructions for causing the computer system to:

define a database comprising large area network address blocks having geographical or source information;

compare an address field in each record to the address blocks in the database; and

associate with each record the geographical or source information from an address block matching the address field of the record.

60. (Previously Presented) The computer program of claim 59, wherein the instructions for causing the computer system to compare an address field in each record to the address blocks in the database include instructions for causing the computer system to:

define an array of binary trees for the address blocks in the database, each address block within a binary tree within an array element being masked by a corresponding unique subnet mask value;

make each address field in each record by a unique subnet value corresponding to a selected array element;

compare each masked address field to an address field of the address blocks within the binary tree of the selected array element;

output selected fields of any matching address block; and

otherwise, continue the step of comparing with a next selected array element until a match is found or all array elements have been compared.

61. (Currently Amended) The computer program of claim 21, further including instructions for causing the computer system to:

determine exit routing paths from each selected server based on the records from the server log;

determine a best performing exit route based on [[the]] a statistical analysis of records from the server log;

bias incoming and outgoing communications with respect to each server to use the determined best performing exit route.

62. (New) The method of claim 1, wherein determining assessments further comprises:

filtering out selected records from the server log, wherein the filtering removes the selected records from further consideration;

aggregating records from the server log into a plurality of aggregate slots, each slot having at least one time bin which represents an interval of time, based on an aggregation method;

performing at least one statistical analysis separately on each time bin of each aggregate slot; and

outputting the results of such statistical analysis as an indication of actual access-to-server usage by users.

63. (New) The system of claim 11, wherein the one or more processors are further configured to:

filter out selected records from the server log, wherein the selected records are removed from further consideration;

aggregate records from the server log into a plurality of aggregate slots, each having at least one time bin, based on an aggregation method;

perform at least one statistical analysis of each time bin, representing a time interval, of each aggregate slot; and

output the results of each statistical analysis as an indication of actual server usage by users.

64. (New) The computer program of claim 21, further including instructions for causing the computer system to:

filter out selected records from the server log, wherein the selected records are removed from further consideration;

aggregate records from the server log into a plurality of aggregate slots, each having at least one time bin, based on an aggregation method;

perform at least one statistical analysis of each time bin, representing a time interval, of each aggregate slot; and

output the results of each statistical analysis as an indication of actual server usage by users.